Product Development with Scrum

XP San Diego
January 6, 2005
By Paul Hodgetts, Agile Logic www.AgileLogic.com
Introductions
Solutions for Delivering Your Projects:
- Agile Process Adoption Solutions
- Coaching, Consulting, Mentoring Services
- Training in Agile Processes, Software Development and Enterprise Technologies
- Turn-Key Software Development

- Fullerton, CA, based
- Founded 2001 by industry veterans
- Contact info: www.agilelogic.com (866) 64-AGILE
Paul Hodgetts

- Team coach, trainer, consultant, developer
- Founder and CEO of Agile Logic
- 22 years overall, 5 years agile experience
- Certified ScrumMaster Trainer
- Innovator in Agile business and project management
- Author (Extreme Programming Perspectives)
- Presenter at conferences (ADC, XPAU, JavaOne)
- Agile Alliance Program Director
- Member of CSUF agile advisory board
- Contact info: phodgetts@agilelogic.com
Process Improvement

- “Improving the way we do things around here.”
- Not “doing a process” for its own sake
- Increasing our capability to deliver software
Most development is chaotic

- Code and fix
- Short term decisions
- Does not scale
- Increasing debt
  - Quality, design, integration, knowledge
Some Development is Bureaucratic

- Complex
- Mandated activities
- High overhead
- Long release cycles
- Inability to keep up with business needs
Options for Process Improvement

“Heroic” Approach

- Relies heavily on individual effort
- Difficult to plan, results unreliable
- High risk of failure
- Heavy human cost
Options for Process Improvement

“Formal” Methodologies

- Detailed, bureaucratic process
- Engineering/construction-style planning - predictive of activities
- Expensive, time-consuming to implement
- Limited success, not popular with teams
Options for Process Improvement

- "Agile" Methodologies
  - Just enough process
  - Adaptive rather than predictive
  - People-oriented focus to the process
  - Faster and less-costly to implement
What Exactly Is an “Agile” Process?

- **Focus on adaptability and responsiveness**
- **Built around core strategies:**
  - Iterative and Incremental Development (IID)
  - Adaptive project management
  - Collaborative, “whole team” approach
  - Common shared vision and goals
- **Constructed from “best practices”:**
  - Emphasis on simplicity, lightness, communication, self-directed teams, quality and technical excellence
The World of Agile Processes

- Scrum
- Extreme Programming (XP)
- Feature-Driven Development (FDD)
- DSDM (Dynamic System Development Method)
- Crystal Family of Processes, e.g. Crystal Clear
- Lean Software Development
- Adaptive Software Development (ASD)
- Others: MSF Agile, Agile UP/RUP, Evo, Win-Win Spiral
The Agile Alliance

- 2001 – representatives from agile processes meet in Snowbird, Utah.
- Agreed on a “manifesto” of values and principles:
  - Individuals and interactions over processes and tools
  - Working software over comprehensive documentation
  - Customer collaboration over contract negotiation
  - Responding to change over following a plan
- “That is, while there is value in the items on the right, we value the items on the left more.”
What in the World is “Scrum?”
Why Scrum?

- Develops software in incremental steps
- Requires delivery of completed software
- Works with your instincts and expertise
- Focuses combined power of team
- Incorporates learning and adaptation
- Easy to learn
- Facilitates incremental adoption
- Scrum is low risk to implement
Scrum is all about **Common Sense**.
The Zen of Scrum

- **Scrum is simple**
  - *Small number of practices*
  - *Practices are straightforward*

- **Scrum is hard**
  - *Requires involvement and common sense*
  - *Requires constant inspection and adaptation to project realities*

- **Scrum is subtle**
  - *Practices are synergistic*
  - *Higher-level benefits emerge*
Scrum History

- 1993 – Ken Schwaber at ADM developed cycle framework
- 1994 – Jeff Sutherland at Easel defined Scrum
- Ken and Jeff work together to refine Scrum
- 1996 – IDX scales Scrum to ~600
- 1996 – Scrum published at OOPSLA
- 2000 – XP practices used within Scrum framework
- 2003 – ScrumMaster certifications
Scrum Projects

- *Scrum has been used on 1,000s of projects*

- **Types of applications:**
  - Financial, FDA life-critical, government, shrink-wrap, enterprise workflow, biotech, embedded real-time, internet e-business

- **Some well-known organizations:**
  - Primavera, Yahoo!, PayPal, Nike
Project Complexity

Three dimensions of complexity

- Domain
- Technology
- People
- Just about all projects these days are complex
Defined, Predictive Process Control

- **Predict and plan expected activities**
- **Management by controlling activities per plan**
- **Change is minimized and managed via change control**
Why Empirical Process Control?

- Ad Hoc control works for low precision problems
- Defined control can bring precision into play
- Complex problems are not predictable, change is common
- Defined control breaks down under unpredictability
- Empirical control manages complexity
Empirical Process Basics

- **Visibility**
  - Important aspects must be visible
  - Realistic and true

- **Inspection**
  - Frequent inspection
  - Ability to assess

- **Adaptation**
  - Monitor for out-of-band results
  - Quick adjustments
Pair Dialogue – Empirical vs. Defined

- Pair up with someone different, turn to each other and share short answers to the following:
  - What are the problems you see with the predictive, defined approach?
  - How does your project team deal with them now?
  - What might be a better way to solve them?
The Scrum Process Structure

DAILY DEVELOPMENT CYCLE

SPRINT CYCLE
(30 days)

PRODUCT RELEASE CYCLE
(1 to 3 sprints...)

BUSINESS PLANNING CYCLE
(quarterly, yearly...)

Source: Adapted from Agile Software Development with Scrum by Ken Schwaber and Mike Beedle.
The Context of Scrum

- Business cycles define overall goals
- Product cycles define product releases
- Context provides vision for development
- Context not specifically part of defined Scrum
The Framework of Scrum

- Iterative, incremental framework
- Each iteration driven by product needs
- Team selects target functionality for increment
- Iterations have a fixed timebox
- Each iteration produces completed product increments
- Two nested cycles – Sprint and Daily
The Core of Scrum

- Within an iteration
- Team determines how to build the increment
- Daily inspection and adaptation
- Creative process exploited within the core
THE "WHOLE TEAM"

BUSINESS TEAM

STAKEHOLDERS
END USERS
MANAGEMENT
OWNERS/B.O.D.
MARKETING/SALES
CUSTOMER SUPPORT
TRAINING

PRODUCT OWNER
PRODUCT MANAGER
BUSINESS ANALYST

DEVELOPMENT TEAM

PROGRAMMERS
ARCHITECTS & DESIGNERS
TECHNICAL LEADS
QA / TESTERS
IA / UI DESIGNERS
DATABASE DESIGNERS / DBAS
TECHNICAL WRITERS
NETWORK ENGINEERS
HARDWARE DESIGNERS

SCRUMMASTER
ADMINISTRATIVE
PROCESS
The Roles in a Scrum Project

- **ScrumMaster**
  - Facilitator and coach

- **Product Owner**
  - Manages product vision and ROI

- **Development Team**
  - Realizes the product plans

- **External Roles**
ScrumMaster

- *Knows Scrum philosophy and practices*
- *Works to ensure team stays on-process*
- *Facilitates work of Product Owner and Development Team*
- *Protects the team from impediments*
- *Personal commitment to the team – the “sheepdog”*
Product Owner

- Represents the interests of the stakeholders
- Collaborates daily with the Development Team
- Communicates product requirements
- Prioritizes requirements based on business value and risk
- Uses “sushi” technique to stage completed business value
- Inspects increments
Development Team

- Cross-functional team builds and completes increments
- Team estimates cost and communicates trade-offs
- Team mutually commits to Sprint backlog
- Team self-organizes and self-manages tasks
- Team is responsible for standards and practices
External Roles

- *External roles have minimal direct involvement*
- *Process issues interface via ScrumMaster*
- *Product issues interface via Product Owner*
- *Team is responsible for status and demonstrations*
Artifacts of a Scrum Project

- **Product Backlog**
  - Owned by Product Owner
  - Captures product requirements
  - Prioritized by business value and risk
  - Supports coarse-grained estimating and planning
### Product Backlog

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Artifacts of a Scrum Project

- *Sprint Backlog*
  - Owned by Development Team
  - Captures team implementation strategy
  - Supports fine-grained tracking
## Sprint Backlog

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**Remaining Effort in Days**

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Artifacts of a Scrum Project

- **Product Increment**
  - Owned by everyone
  - “Complete” and potentially shippable system
  - The ultimate measure of progress
Product Vision

- Organization identifies overall project goals
- Organization devises overall product strategy to meet goals
- Organization defines investment and resource commitments
Scrum Process Flow
Develop Product Backlog

- Product Owner plans and defines features sets
- Product Owner builds feature definitions
- Product Owner identifies Product Backlog items
- (Development Team estimates Product Backlog)
- (Product Owner prioritizes Product Backlog)
Scrum Process Flow

Vision
Anticipated ROI, Releases, Milestones

Product Backlog
Emerging, prioritized requirements

Selected Product Backlog

Sprint

New functionality is demonstrated at end of sprint

Sprint Backlog

Daily Scrum
every 24 hours

Scrum Flow
Sprint Planning

- ScrumMaster, Product Owner, Development Team
- Typically about one day in duration
- Product Owner arrives with prepared Product Backlog
- Two parts – Select Backlog for Sprint, Sprint Backlog Planning
Select Backlog for Sprint

- Typically about a half-day in duration
- Product Owner and Development Team discuss Product Backlog items
- Product Owner and Development Team choose target Backlog items for Sprint
  - Team agrees on “theme” for Sprint
  - Product Owner prioritizes on importance
  - Development Team estimates and commits
Sprint Backlog Planning

- Typically about a half-day in duration
- Development Team explores each Sprint Backlog item in more detail
- Development Team devises strategies for building Sprint Backlog Items
- Development Team builds Sprint Backlog
  - Tasks, task estimates
  - Development team determines implementation plan
  - Initial task assignments
  - Sufficient to gain mutual commitment and start Sprint
Scrum Process Flow

- **Vision**: Anticipated ROI, Releases, Milestones
- **Product Backlog**: Emerging, prioritized requirements
- **Selected Product Backlog**
- **Sprint Backlog**
- **Sprint**: every 24 hours
- **Daily Scrum**
- **New functionality is demonstrated at end of sprint**
Daily Scrum

- **First thing in the day, all team members required to attend**
- **Typically about 15 minutes in duration**
- **Round robin, each team member answers three core questions:**
  - What did I accomplished over the past day?
  - What will commit to working on today?
  - What does the team need to know about?
    - Obstacles preventing progress?
    - Need to collaborate with others?
    - Important discoveries and learning?
- **Additional conversations arranged for after the meeting**
- **Non-team members may observe, but not participate**
Sprint

- Team can seek outside advice, help, information, support
- No direct advice, instructions, commentary, direction from outside the team
- Product Backlog for Sprint remains stable during Sprint
- Team works on and completes Backlog items
- Development Team adjusts strategies and tasks as needed
- Team updates Sprint Backlog tracking during the Sprint
Engineering Practices

- Standards – design, coding, “sane subsets”
- Source code management
- Engineering and functional testing
- Design improvement – refactoring
- Frequent integration
- Automated builds and configuration management
- Collective code stewardship
- Collaborative work environment
What Does “Complete” Mean?

- Code is written and compiles
- Code is unit tested
- Code adheres to standards, is clean and refactored
- Code is checked-in and builds
- Backlog item is functional tested
- System is regression tested
- Installation and deployment is ready
- Documentation, training is ready
Scrum Process Flow
Sprint Review

- Typically about a half-day in duration, minimal preparation
- Development Team presents completed increment to Product Owner and stakeholders
- Incomplete Backlog items are not presented
- System should be deployed on a QA server
Sprint Review

- Review Sprint goals, answer questions
- Stakeholders polled for comments
- Product Owner, stakeholders, Development Team discuss and make Product Backlog adjustments
- Next Sprint review scheduled
Sprint Retrospective

- Typically less than a half-day in duration
- ScrumMaster, Development Team, Product Owner only
- Each team member answers two questions:
  - What went well during the Sprint?
  - What could be improved for the next Sprint?
  - SAMOLO - Same As, More Of, Less Of
- ScrumMaster records answers and summarizes
- Team prioritizes improvement issues
- Team creates Sprint Backlog action items for next Sprint
Delivering Releases

- Latest completed Sprint increment used
- Stabilization Sprints may be needed
- Hold reviews with key users after release
References and Resources

- **Agile Software Development with Scrum**
  - By Ken Schwaber and Mike Beedle

- **Agile Project Management with Scrum**
  - By Ken Schwaber

- **Ken Schwaber’s Scrum Site**
  - www.ControlChaos.com

- **Mike Cohn’s Scrum Site**
  - www.MountainGoatSoftware.com/scrum

- **Scrum Development Discussion List**
  - groups.yahoo.com/group/scrumdevelopment/
  - (Lots of other great Yahoo! groups.)

- **The Agile Alliance Site**
  - www.AgileAlliance.org

- **Agile Logic’s Resources Site**
  - www.AgileLogic.com/resources.html
What’s Next?

- **Project Initiation Plan**
  - Present project vision, goals, timelines
  - Define Product Backlog for at least three months
  - Teach Sprint planning
  - Brainstorm about overcoming impediments
  - Brainstorm about Product Backlog for next Sprint - team commits
  - Team defines Sprint Backlog
  - Teach daily Scrum, Sprint review, Sprint signature, and management
  - Discuss engineering tools and practices
ScrumMaster Responsibilities

- Removing the barriers between development and the customer so the customer directly drives development;
- Teaching the customer how to maximize ROI and meet their objectives through Scrum;
- Improving the lives of the development team by facilitating creativity and empowerment;
- Improving the productivity of the development team in any way possible; and,
- Improving the engineering practices and tools so each increment of functionality is potentially shippable.
Tracking and Reporting

- *Current status*
- *Progress towards releases*
- *Changes in plans and why*
- *Issues and actions to improve*
- *Big Visible Charts and Project Dashboards*
## Tracking and Reporting

### Product Backlog Tracking

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Est</th>
<th>By</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Finish database versioning</td>
<td>10</td>
<td>KH</td>
</tr>
<tr>
<td>2</td>
<td>Get list of unnecessary shared Java in database</td>
<td>8</td>
<td>KH</td>
</tr>
<tr>
<td>3</td>
<td>Add licensing</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>Concurrent user licensing</td>
<td>16</td>
<td>T6</td>
</tr>
<tr>
<td>5</td>
<td>Demo / Eval licensing</td>
<td>16</td>
<td>T6</td>
</tr>
<tr>
<td>6</td>
<td>Analysis Manager</td>
<td>160</td>
<td>T6</td>
</tr>
<tr>
<td>7</td>
<td>File formats we support are out of date</td>
<td>200</td>
<td>T6</td>
</tr>
<tr>
<td>8</td>
<td>Roundtrip Analysis</td>
<td>-</td>
<td>MC</td>
</tr>
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</table>

### High

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Est</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Enforce unique names</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>In main application</td>
<td>24</td>
<td>KH</td>
</tr>
<tr>
<td>3</td>
<td>Admin Program</td>
<td>24</td>
<td>AM</td>
</tr>
<tr>
<td>4</td>
<td>Delete users</td>
<td>4</td>
<td>JH</td>
</tr>
<tr>
<td>5</td>
<td>Analyst Manager</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>When users are removed from an analysis, they show up again in the pick list in lower 1/2 of the analysis tab</td>
<td>8</td>
<td>T6</td>
</tr>
<tr>
<td>7</td>
<td>Query</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>8</td>
<td>Support for wildcards when searching</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>9</td>
<td>Sorting of number attributes to handle negative numbers</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>10</td>
<td>Horizontal scalability</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>11</td>
<td>Population Genetics</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>12</td>
<td>Frequency Manager</td>
<td>400</td>
<td>T6M</td>
</tr>
<tr>
<td>13</td>
<td>Query Tool</td>
<td>400</td>
<td>T6M</td>
</tr>
<tr>
<td>14</td>
<td>Additional Editors (which ones)</td>
<td>240</td>
<td>T6M</td>
</tr>
<tr>
<td>15</td>
<td>Study Variable Manager</td>
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<td>T6M</td>
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<tr>
<td>16</td>
<td>Add icons for v1.1 or 2.0</td>
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<td>-</td>
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<tr>
<td>17</td>
<td>Pedigree Manager</td>
<td>-</td>
<td>-</td>
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<tr>
<td>18</td>
<td>Validate (Home/Inbred)</td>
<td>20</td>
<td>T6A</td>
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### Medium

<table>
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<th>Description</th>
<th>Est</th>
<th>By</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>Launch tab synchronization (only show queries/analyses for logged in users)</td>
<td>8</td>
<td>T6A</td>
</tr>
<tr>
<td>20</td>
<td>Delete settings (?)</td>
<td>4</td>
<td>T6A</td>
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</table>

### Story

<table>
<thead>
<tr>
<th>Story</th>
<th>Priority</th>
<th>Estimate</th>
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</thead>
<tbody>
<tr>
<td>User browses product category list</td>
<td>M</td>
<td>2.0</td>
</tr>
<tr>
<td>User selects &amp; browses product category</td>
<td>M</td>
<td>2.0</td>
</tr>
<tr>
<td>User views product details</td>
<td>M</td>
<td>1.0</td>
</tr>
<tr>
<td>User views shopping cart</td>
<td>M</td>
<td>1.0</td>
</tr>
<tr>
<td>User adds product to shopping cart</td>
<td>M</td>
<td>1.0</td>
</tr>
<tr>
<td>User views shopping cart</td>
<td>M</td>
<td>1.0</td>
</tr>
<tr>
<td>User starts check out, reviews order</td>
<td>M</td>
<td>1.0</td>
</tr>
<tr>
<td>User enters shipping info</td>
<td>M</td>
<td>1.0</td>
</tr>
<tr>
<td>User pays by credit card - simple case</td>
<td>M</td>
<td>2.0</td>
</tr>
<tr>
<td>User enters separate billing address</td>
<td>S</td>
<td>1.0</td>
</tr>
<tr>
<td>System validates payment with service</td>
<td>M</td>
<td>3.0</td>
</tr>
<tr>
<td>System save user profile for later order</td>
<td>S</td>
<td>2.0</td>
</tr>
<tr>
<td>User enters CV number</td>
<td>S</td>
<td>1.0</td>
</tr>
<tr>
<td>System displays order summary</td>
<td>S</td>
<td>1.0</td>
</tr>
<tr>
<td>User searches for product key words</td>
<td>S</td>
<td>3.0</td>
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</tbody>
</table>
# Tracking and Reporting

## Sprint Tracking

<table>
<thead>
<tr>
<th>Date logged</th>
<th>RFA</th>
<th>Description</th>
<th>Remaining Effort in Days</th>
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<tbody>
<tr>
<td>11-Feb-2002</td>
<td>1</td>
<td>UI Object Model</td>
<td>2 1 0 0 0 0 2 3 3</td>
</tr>
<tr>
<td>11-Feb-2002</td>
<td>1</td>
<td>UI Framework</td>
<td>3 1 1 1 1 1 0 0 2 3</td>
</tr>
<tr>
<td>11-Feb-2002</td>
<td>1</td>
<td>Learn Torque API</td>
<td>2 0 0 0 0</td>
</tr>
<tr>
<td>11-Feb-2002</td>
<td>1</td>
<td>Learn Struts/Tiles API</td>
<td>3 3 0 0</td>
</tr>
<tr>
<td>11-Feb-2002</td>
<td>1</td>
<td>Finish HTML admin UI workflow</td>
<td>1 1 0 0</td>
</tr>
<tr>
<td>11-Feb-2002</td>
<td>1</td>
<td>Complete SRS use cases for 2nd iteration</td>
<td>2 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>11-Feb-2002</td>
<td>4</td>
<td>Migrate CPM to WAS 4.0 to get a WAR JEetspeed</td>
<td>5 5 4 4 4 4 4 4 4 4 4</td>
</tr>
<tr>
<td>11-Feb-2002</td>
<td>4</td>
<td>Implement UT for J2EE (Cactus)</td>
<td>2 2 2 2 2 2 2 2 2 0 0 0</td>
</tr>
<tr>
<td>15-Feb-2002</td>
<td>4</td>
<td>Automate DB test data upload</td>
<td>12 4 2 2 0 1 1 1 1 1 1 1 1</td>
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<tr>
<td>13-Feb-2002</td>
<td>4</td>
<td>Extract CPM CD schema with Torque</td>
<td>4 1 0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>19-Feb-2002</td>
<td>1</td>
<td>Design Access Control</td>
<td>2 2 2 2 2 2 2 2 2 0 0 0</td>
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<tr>
<td>18-Feb-2002</td>
<td>1</td>
<td>Design Business Entity Type</td>
<td>2 2 2 1 1 1 1 1 0 2 1 0 0 0 0</td>
</tr>
<tr>
<td>25-Feb-2002</td>
<td>1</td>
<td>Set development environment</td>
<td>1 1 1 1 0 0 0 0 0 0 0 0 0 0 0</td>
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<tr>
<td>25-Feb-2002</td>
<td>1</td>
<td>Verify what and how is used for attribute definition</td>
<td>1 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>25-Feb-2002</td>
<td>4</td>
<td>Torque primary key generator for CPM</td>
<td>2 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>25-Feb-2002</td>
<td>4</td>
<td>Torque/Struts/CPM OM prototype</td>
<td>2 2 1 1 0 0 0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>27-Feb-2002</td>
<td>4</td>
<td>Implement Business Entity Type UI</td>
<td>2 2 2 2 2 1 0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>27-Feb-2002</td>
<td>1</td>
<td>Define Access Group UI and workflow</td>
<td>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</td>
</tr>
<tr>
<td>4-Mar-2002</td>
<td>BE Session façade</td>
<td>7 6 5 5 5 5 5 5 5 5 5</td>
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</tr>
<tr>
<td>7-Mar-2002</td>
<td>4</td>
<td>Torque Blob Problem</td>
<td>4 1 0 0 0 0 0 0 0 0 0 0 0 0 0</td>
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<td>8-Mar-2002</td>
<td>1</td>
<td>Deploy admin UI on WAS 3.6</td>
<td>1 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td>
</tr>
</tbody>
</table>
Tracking and Reporting

- **Progress Reporting – Burn-Down Chart**

![Progress Chart](attachment:image.png)
Tracking and Reporting

- Progress Reporting – Burn-Up Chart

![Burn-Up Chart Image]

---

`Feature Completion` chart showing:
- Feature Points
- Iteration End Dates

Legend:
- Drug Testing
- Release 3x
- Release 3B+
- Release 3A
- Moving Ave. Velocity
- Average Velocity
- Planned Velocity
- Completed
Tool Support for Scrum

- *Start simple and stay that way*
- *Find tools that work with you*
# Tool Support

**Simple spreadsheets and documents**

<table>
<thead>
<tr>
<th>Who</th>
<th>Description</th>
<th>Days Left In Sprint</th>
<th>15</th>
<th>13</th>
<th>10</th>
<th>8</th>
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<tbody>
<tr>
<td></td>
<td>User's Guide</td>
<td>-</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>SM</td>
<td>Start on Study Variable chapter first draft</td>
<td>40</td>
<td>24</td>
<td>24</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>SM</td>
<td>Import chapter first draft</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Misc</td>
<td>Small Bugs</td>
<td>40</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>JM</td>
<td>Fix connection leak</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>JM</td>
<td>Delete queries</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>JM</td>
<td>Delete analysis</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>TG</td>
<td>Fix tear-off messaging bug</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>JM</td>
<td>View pedigree for kindred column in a result set</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
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<tr>
<td>AM</td>
<td>Derived kindred validation</td>
<td>8</td>
<td>8</td>
<td>8</td>
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<tr>
<td></td>
<td>Environment</td>
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<tr>
<td>TG</td>
<td>Install CVS</td>
<td>40</td>
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<tr>
<td>TBD</td>
<td>Move code into CVS</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>TBD</td>
<td>Move to JDK 1.4</td>
<td>8</td>
<td>8</td>
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</tr>
<tr>
<td></td>
<td>Database</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>KH</td>
<td>Killing Oracle sessions</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>KH</td>
<td>Finish 2.205 database patch</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
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<td>Make a 2.207 database patch</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>KH</td>
<td>Figure out why 451 indexes are created</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

*Total Estimated Hours:* 554 458 362 270 0
Tool Support

Version One (www.VersionOne.net)
Tool Support

Rally (www.RallyDev.com)
Tool Support

ScrumWorks (www.ScrumWorks.com)
What to Expect?

- *Initial progress will likely be slower than anticipated*
- *The process will quickly reveal constraints*
- *Team will take time to learn how to self-organize*
- *You will want to tell the team how to solve problems*
- *You will need encourage visibility and transparency*
- *Team may have difficulties focusing on daily plan*
Typical “Process Smells”

- Loss of rhythm
- Too much involvement from external roles
- Team members missing in action
- Persistent unpredictability or fluctuations
- ScrumMaster is assigning work
- ScrumMaster is focus of Daily Scrum
- Unhealthy specialization or ownership